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# Expressing the Scholarly Works (Eprints) DC Application Profile using the DSP wiki syntax

DC-2007: Application Profiles: Theory and Practice, Singapore

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- Report of work done by Julie Allinson  
(UKOLN/University of York)



# Background to the Eprints DCAP

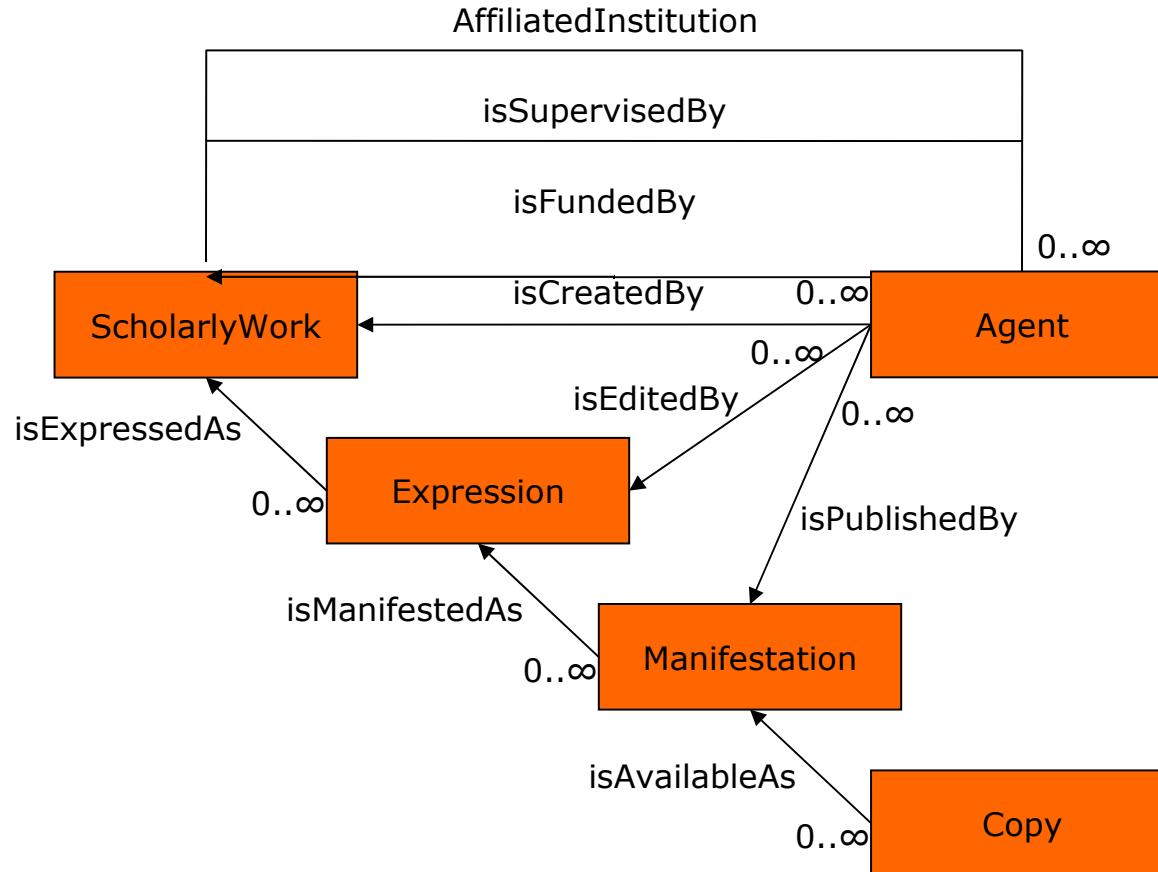
- Eprints AP development funded by JISC, Summer 2006
- Co-ordinated by Julie Allinson & Andy Powell (Eduserv Foundation)
- Specification for using DC metadata for eprints that overcomes limitations of "Simple DC"
  - especially relationships between "versions"
  - "what is being described?"
- "eprint":
  - a "scientific or scholarly research text" (Budapest Open Access Initiative)
  - e.g. peer-reviewed journal article, preprint, working paper, thesis, book chapter, report, etc.



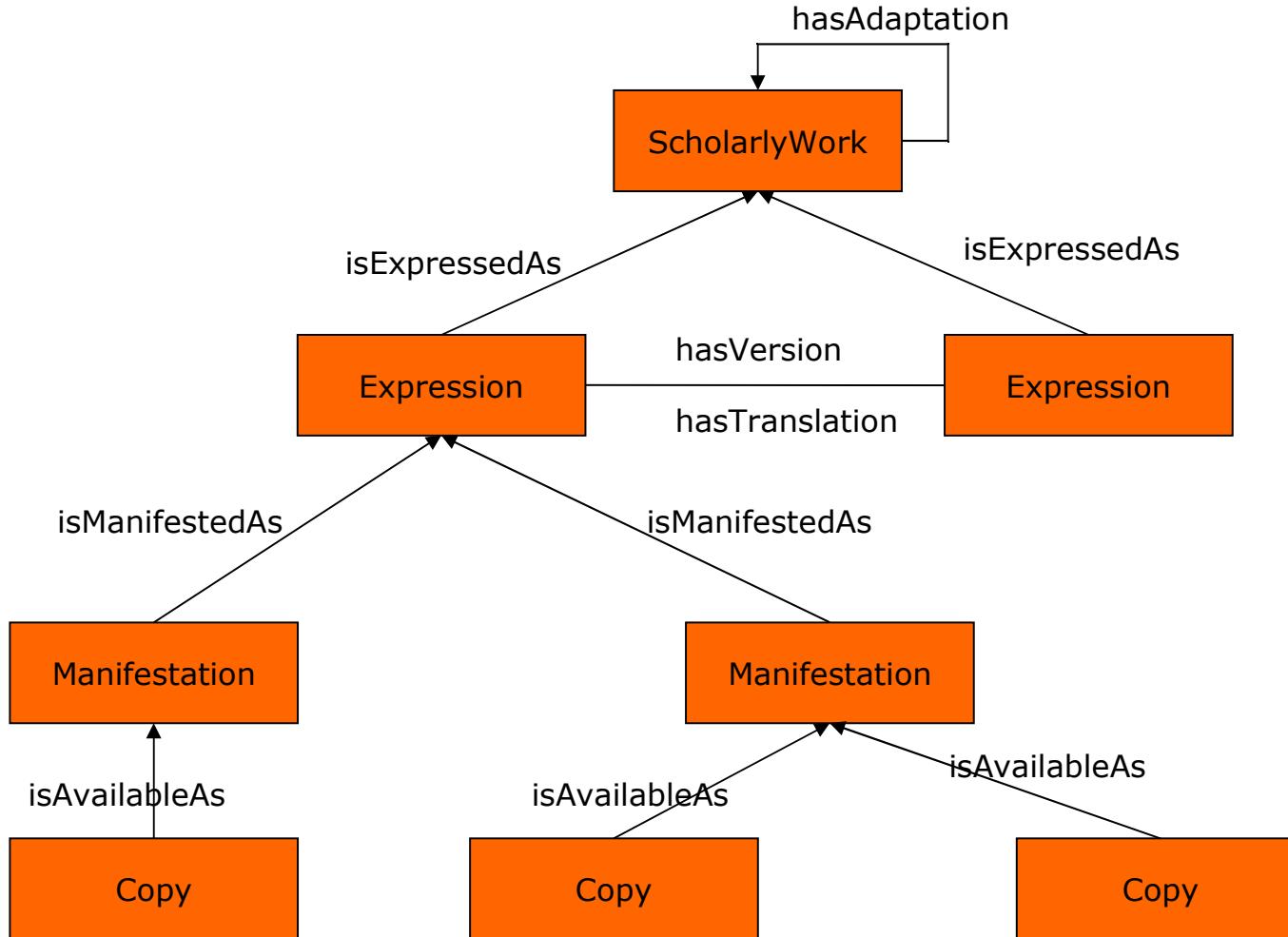
# Components

- Functional requirements specification
- Domain model
  - Based on subset of FRBR
- The "eprints DCAP"
  - a "Description Set Profile"
  - plus human-readable commentary, usage guidelines
- New vocabularies of metadata terms
  - With URIs like <http://purl.org/eprint/terms/xyz>
- Eprints DC-XML XML format
  - Based on DC-XML-Full, Version 2006-09-18

# The eprints DCAP Domain Model



# The eprints DCAP Domain Model





# The eprints DCAP as DSP

- Developed initially using "traditional" "tabular" DCAP presentation
- Document divided into five sections/tables, one for description of each entity type
  - -> DSP Description Template
- Each section/table divided into rows, one for each statement type within description
  - -> DSP Statement Template
- For statement referencing Literal Value
  - -> DSP Literal Value Constraint
- For statement referencing Non-Literal Value
  - -> DSP Non-Literal Value Constraint

[http://www.ukoln.ac.uk/repositories/digirep/index/EPrints\\_Application\\_Profile](http://www.ukoln.ac.uk/repositories/digirep/index/EPrints_Application_Profile)

- **Description of ScholarlyWork**

```
DT=(  
    ID="ScholarlyWork"  
    min="1" max="1"  
    standalone="yes"  
    RC=[http://purl.org/eprint/entityType/ScholarlyWork/]  
)
```

- **Description of Expression of ScholarlyWork**

```
DT=(  
    ID="Expression"  
    standalone="no"  
    RC=[http://purl.org/eprint/entityType/Expression/]  
)
```

- And so on for Descriptions of Manifestation, Copy, Agent

- **Description of ScholarlyWork**

```
DT=(  
    ID="ScholarlyWork"  
    min="1" max="1"  
    standalone="yes"  
    RC=[http://purl.org/eprint/entityType/ScholarlyWork/  
)
```

- **Title**

```
ST=(  
    type="literal"  
    min="1"  
    PC={http://purl.org/dc/elements/1.1/title}  
)
```

## - Subject

```
ST=(  
    type="nonliteral"  
    PC={http://purl.org/dc/elements/1.1/subject}  
)  
  
NLC=(  
    VURIConstraint=( occurrence="optional")  
    VESConstraint=( occurrence="optional")  
    VStringConstraint=(max="1"  
        LangC=(occurrence="optional")  
        SESConstraint=(occurrence="disallowed")  
    )  
)
```

## – Is Expressed As

```
ST=(  
    type="nonliteral"  
    PC={http://purl.org/eprint/terms/isExpressedAs}  
)  
  
NLC=(  
    description="expression"  
    [http://purl.org/eprint/entityType/Expression]  
    VURIConstraint=( occurrence="mandatory")  
    VESConstraint=( occurrence="disallowed")  
    VStringConstraint=(max="0")  
)
```

- And so on for Statements referencing other properties

[http://knowware.nada.kth.se/DCWiki/  
EprintsApplicationProfile?action=raw](http://knowware.nada.kth.se/DCWiki/EprintsApplicationProfile?action=raw)

EprintsApplicationProfile - DCWiki - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://knowware.nada.kth.se/DCWiki/EprintsApplicationProfile

EduInt EduEma EduF eFou TyPad del Post del MyBl Sub MyBl eF del Post eF del Tec eFou Post Tec fav tabulate Con Post Con Fbk Twitter Last.FM DH

Disable Cookies CSS Forms Images Information Miscellaneous Outline Resize Tools View Source Options

Export Contact Google Calendar Google Maps Flickr Del.icio.us Technorati

Property URI ( eprint:hasAdaptation )  
Value URI ( <http://www.example.com/mypaper.ppt> )

)

## Is Expressed As

Property	<a href="http://purl.org/eprint/terms/isExpressedAs">http://purl.org/eprint/terms/isExpressedAs</a>
Literal?	No
Definition	A version of the described eprint.
Eprint-specific recommendation	An expression of the described eprint. In FRBR terms, an eprint is a Work.  Use this <i>property</i> to provide the URI of an expression of the eprint and/or to link to a <i>related description</i> (with the <i>description set</i> ) about the expression.
Value (Non-Literal)	<b>Description:</b> expression  <b>Vocabulary Encoding Scheme Constraint</b> <b>Occurrence:</b> disallowed  <b>Value String Constraint:</b> Max occurrence 0  <b>Syntax Encoding Syntax Constraint:</b> <b>Occurrence:</b> disallowed  <b>Language Constraint:</b> <b>Occurrence:</b> disallowed

For example:

```
Statement {  
    Property URI ( eprint:isExpressedAs )  
    DescriptionRef ( expression1 )  
}
```

<http://knowware.nada.kth.se/DCWiki/EprintsApplicationProfile>

Description of an Expression of the eprint

Entity type

```
- <NonliteralConstraint>
  <ValueURIOccurrence>mandatory</ValueURIOccurrence>
  <VocabularyEncodingSchemeOccurrence>disallowed</VocabularyEncodingSchemeOccurrence>
- <ValueStringConstraint maxOccur="0">
  <SyntaxEncodingSchemeOccurrence>disallowed</SyntaxEncodingSchemeOccurrence>
  <LanguageOccurrence>disallowed</LanguageOccurrence>
</ValueStringConstraint>
</NonliteralConstraint>
</StatementTemplate>
- <StatementTemplate type="nonliteral">
  <Property>http://purl.org/eprint/terms/isExpressedAs</Property>
- <NonliteralConstraint descriptionTemplateID="expression">
  <VocabularyEncodingSchemeOccurrence>disallowed</VocabularyEncodingSchemeOccurrence>
- <ValueStringConstraint maxOccur="0">
  <SyntaxEncodingSchemeOccurrence>disallowed</SyntaxEncodingSchemeOccurrence>
  <LanguageOccurrence>disallowed</LanguageOccurrence>
</ValueStringConstraint>
</NonliteralConstraint>
</StatementTemplate>
</DescriptionTemplate>
- <DescriptionTemplate ID="Expression">
  <ResourceClass>http://purl.org/eprint/entityType/Expression/</ResourceClass>
- <StatementTemplate minOccur="1" maxOccur="1" type="nonliteral">
  <Property>http://purl.org/dc/elements/1.1/type</Property>
- <NonliteralConstraint>
  <ValueURIOccurrence>mandatory</ValueURIOccurrence>
  <ValueURI>http://purl.org/eprint/entityType/Expression/</ValueURI>
  <VocabularyEncodingSchemeOccurrence>mandatory</VocabularyEncodingSchemeOccurrence>
  <VocabularyEncodingScheme>http://purl.org/eprint/entityType/</VocabularyEncodingScheme>
- <ValueStringConstraint maxOccur="0">
  <SyntaxEncodingSchemeOccurrence>disallowed</SyntaxEncodingSchemeOccurrence>
  <LanguageOccurrence>disallowed</LanguageOccurrence>
</ValueStringConstraint>
</NonliteralConstraint>
</StatementTemplate>
- <StatementTemplate type="literal">
  <Property>http://purl.org/dc/elements/1.1/title</Property>
</StatementTemplate>
- <StatementTemplate type="nonliteral">
  <Property>http://purl.org/dc/elements/1.1/description</Property>
</StatementTemplate>
- <StatementTemplate minOccur="1" type="literal">
```

[http://knowware.nada.kth.se/DCWiki/  
EprintsApplicationProfile?action=DSP2XML](http://knowware.nada.kth.se/DCWiki/EprintsApplicationProfile?action=DSP2XML)



# Issues arising

- Formal model based on description model of DCAM 2007-06-04
  - e.g. literal v non-literal values
- Constraint matching limitations e.g.
- DT may contain max of one ST referencing a single property
- ST must contain either a NLC or a LC
- So
  - can't specify the use of a statement referencing property P with either a literal value or a non-literal value
    - e.g. dcterms:abstract (abstract as literal or as document)
  - can't specify the use of a statement referencing property P with two different NLCs
    - e.g. dcterms:subject (subject as keyword/no VES or subject as member of specified VES)

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Title slide photo of Singapore Orchid Gardens by Flickr user Andries3  
See <http://www.flickr.com/photos/andriesoudshoorn/458660650/>  
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